

This cross-sectional view shows a trench structure in a semiconductor device. The trench is defined by a gate stack (110) and a channel layer (106). The gate stack includes a gate oxide (111) and a gate electrode (112). The channel layer (106) is located within the trench. The device is built on a substrate (101) with various layers (102, 103, 104a, 104b, 105, 107, 108a, 108b, 109) and a top layer (113). Arrows indicate the direction of light emission or detection. Labels E and E' indicate specific regions or interfaces.

Fig.2

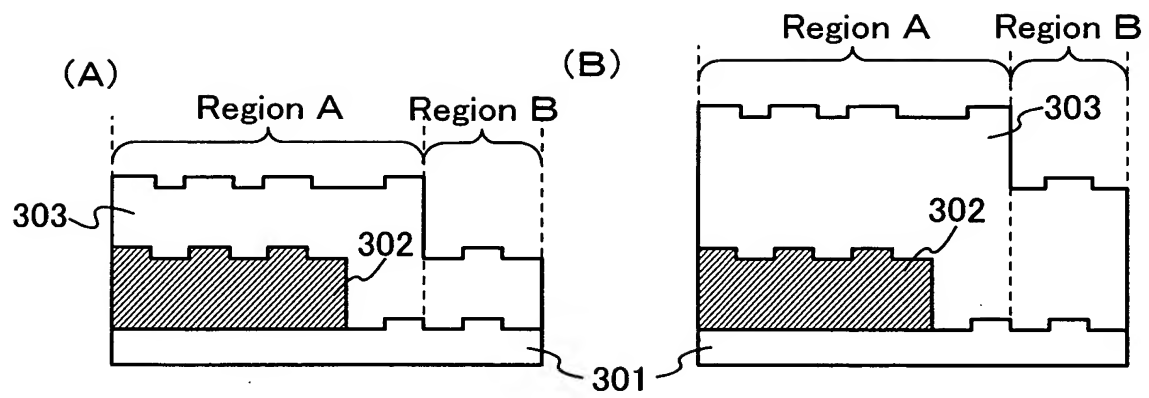


Fig.3

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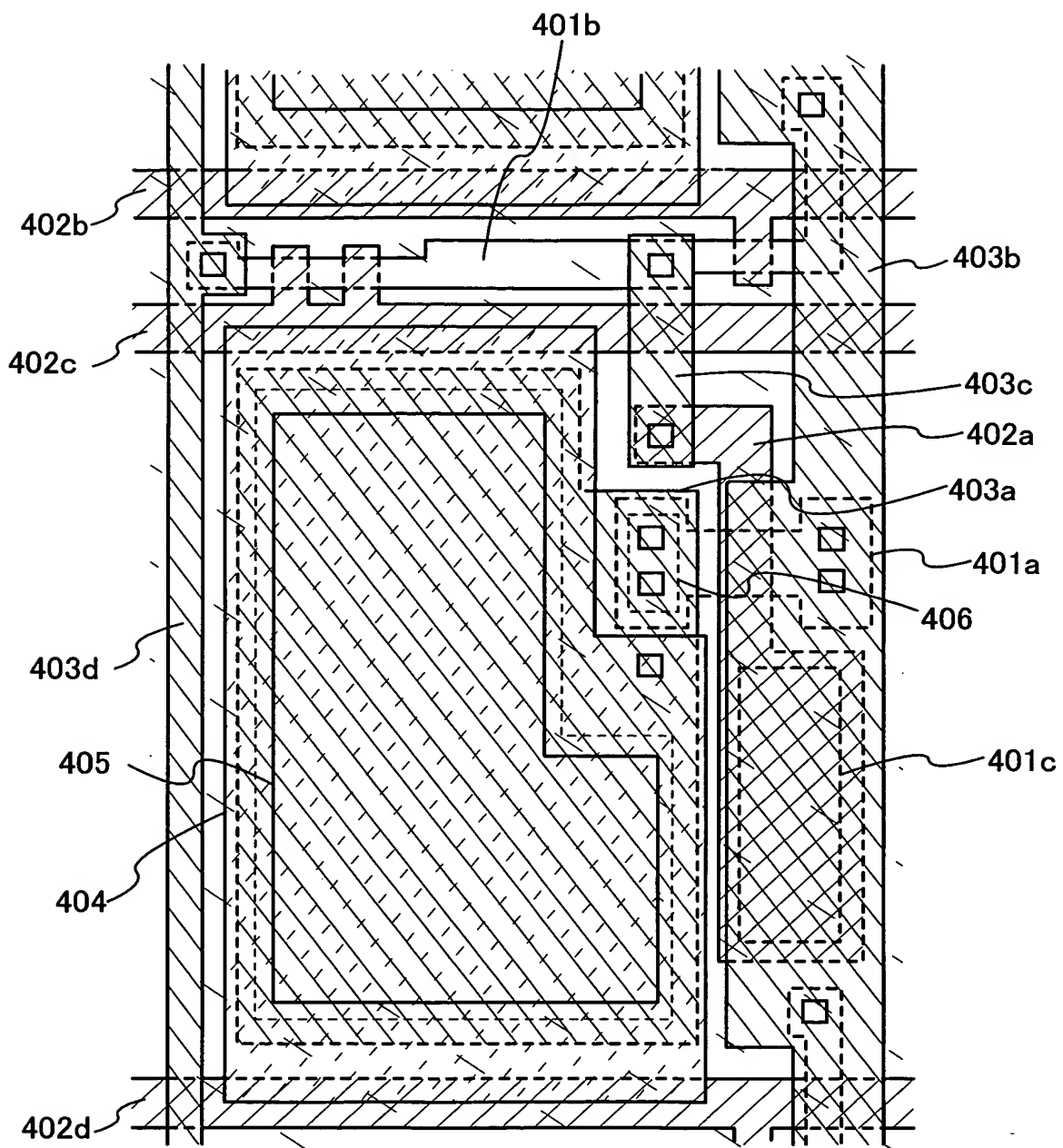


Fig.4(A)

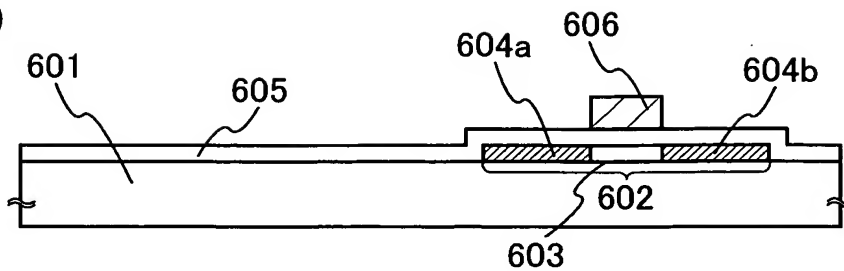


Fig.4(B)

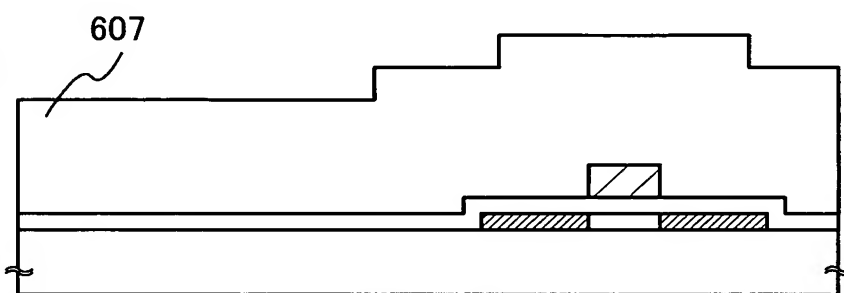


Fig.4(C)

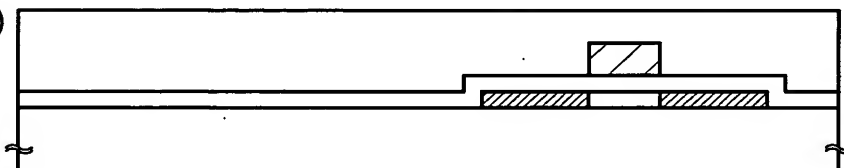


Fig.4(D)

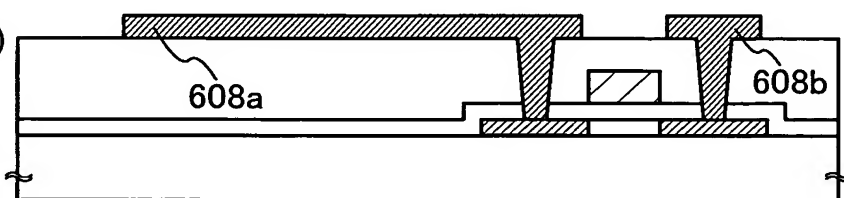
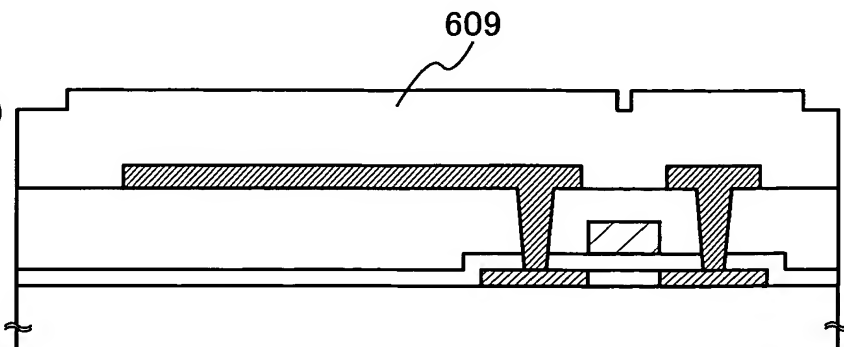


Fig.4(E)



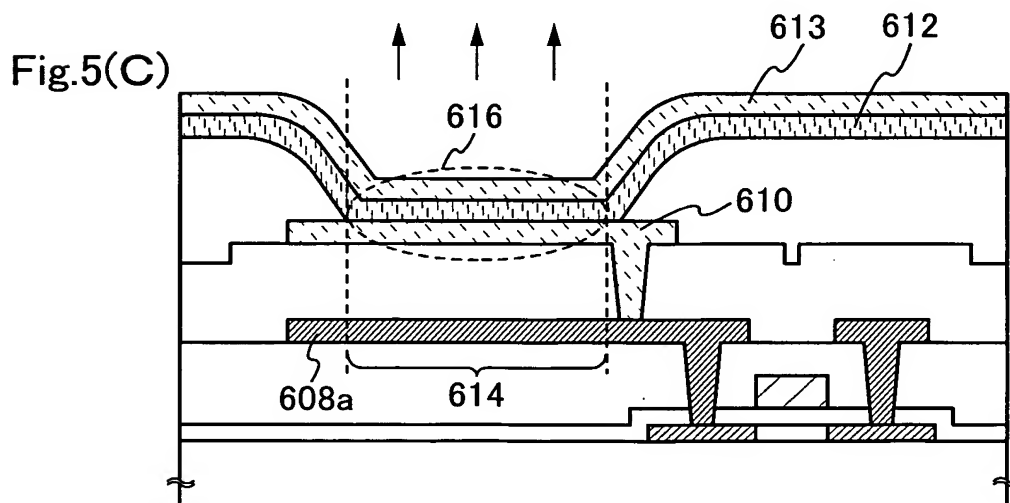
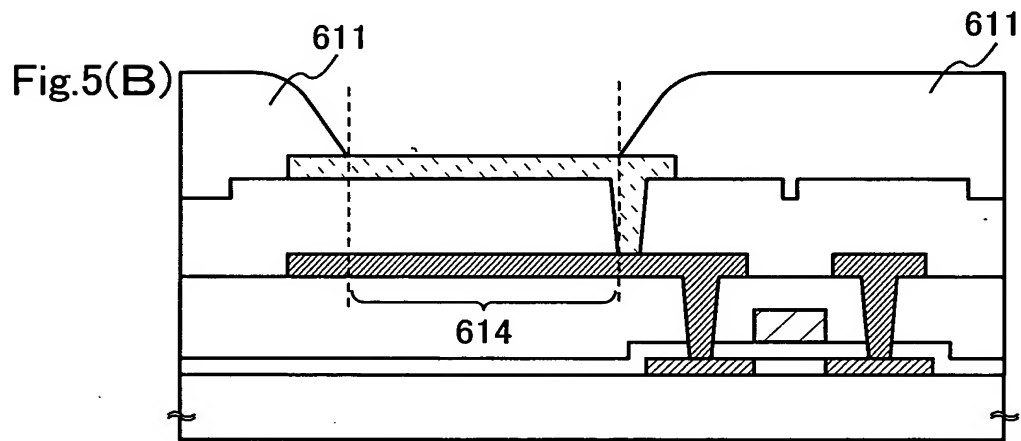
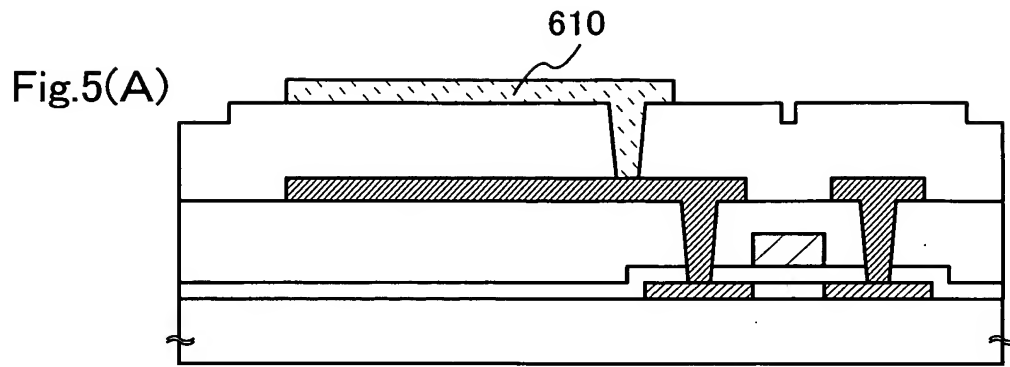


Fig.6 (A)

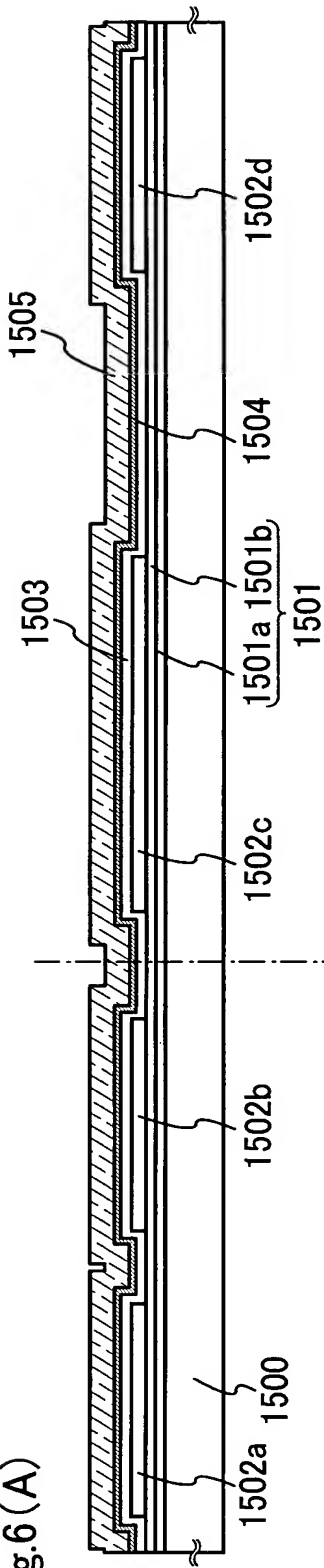


Fig.6 (B)

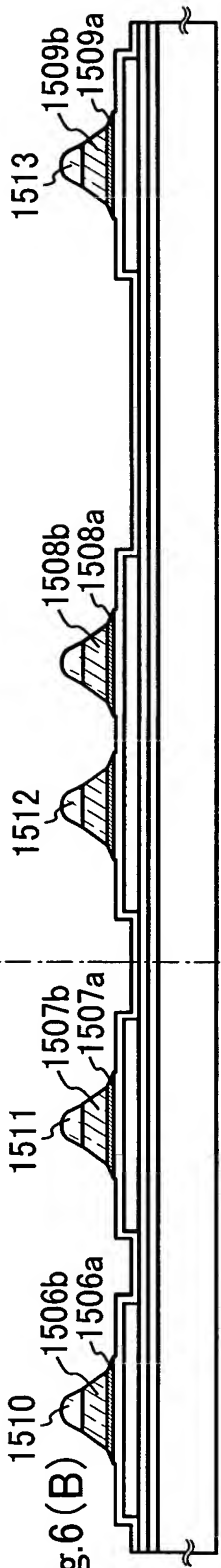


Fig.6 (C)

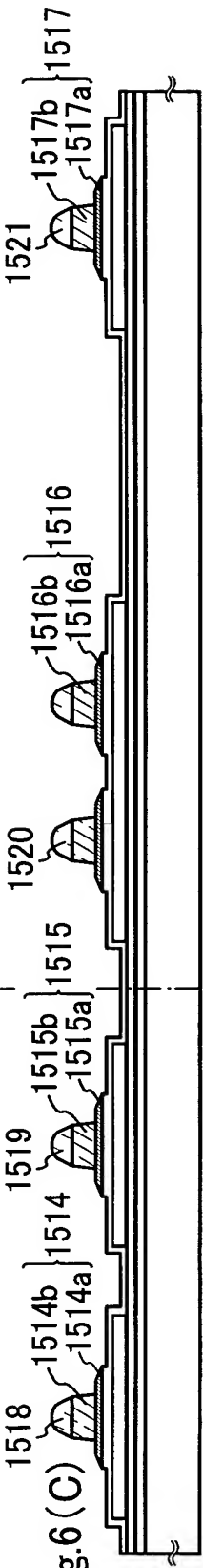


Fig.7 (A)

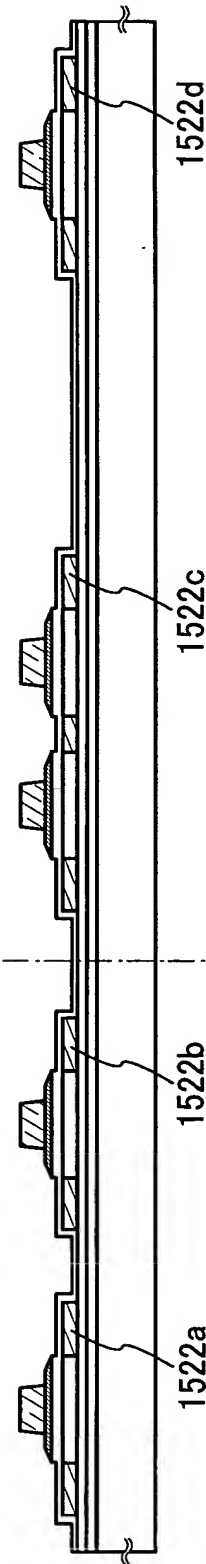


Fig.7 (B)

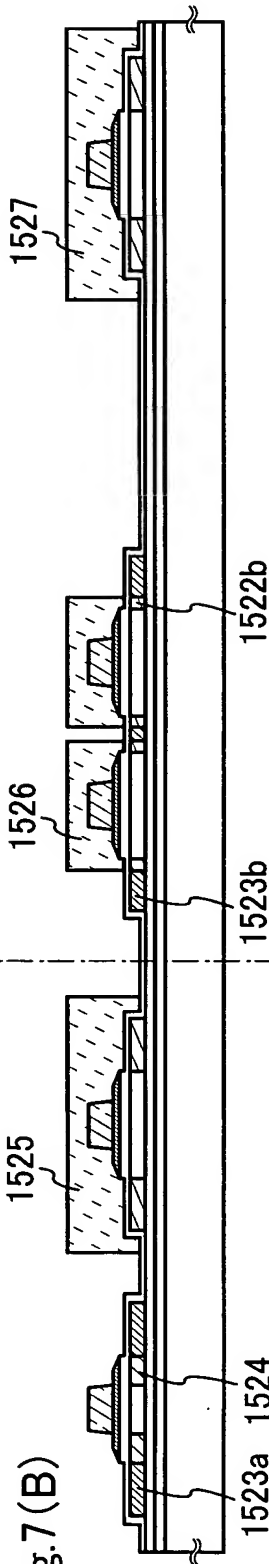


Fig.7 (C)

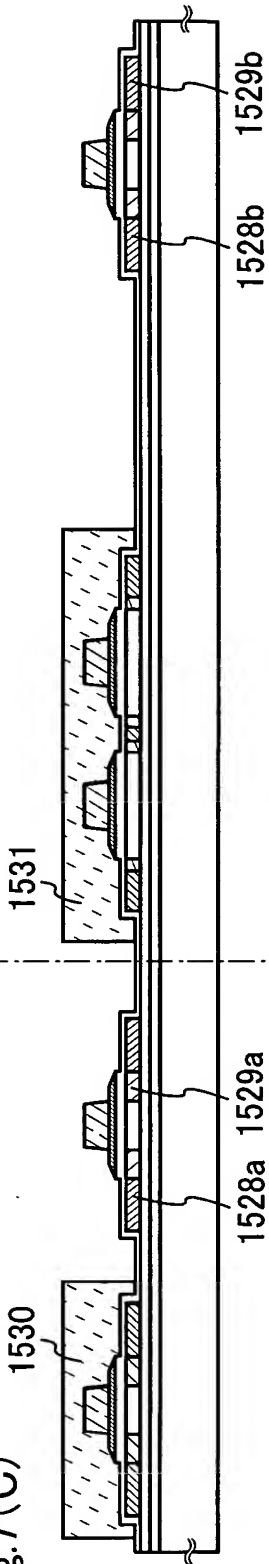


Fig.8 (A)

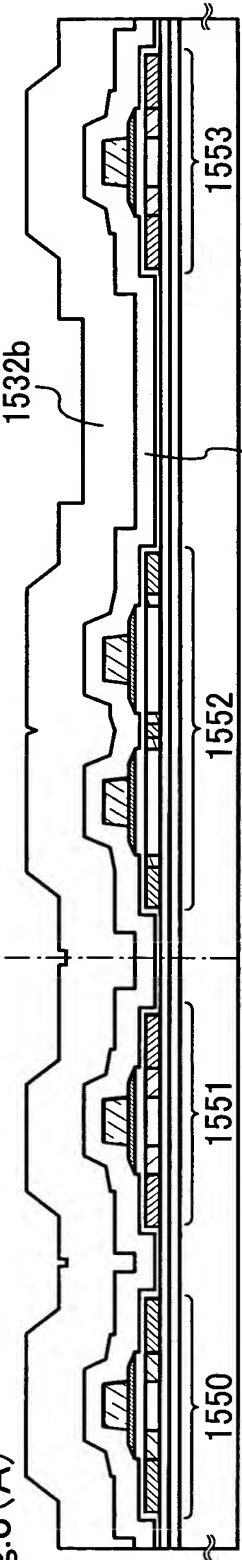


Fig.8 (B)

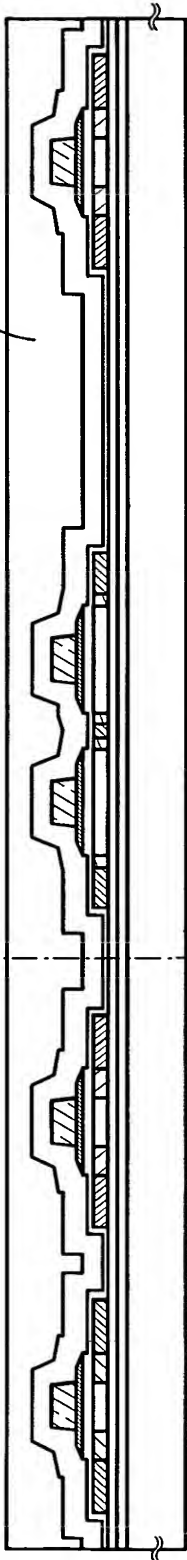
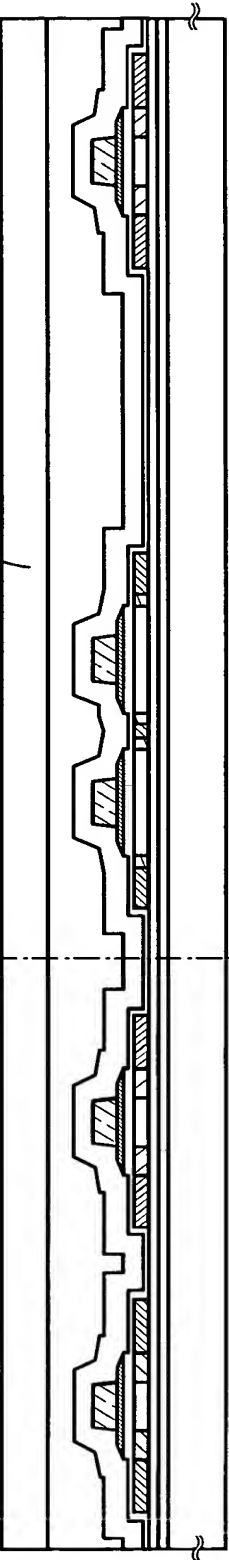
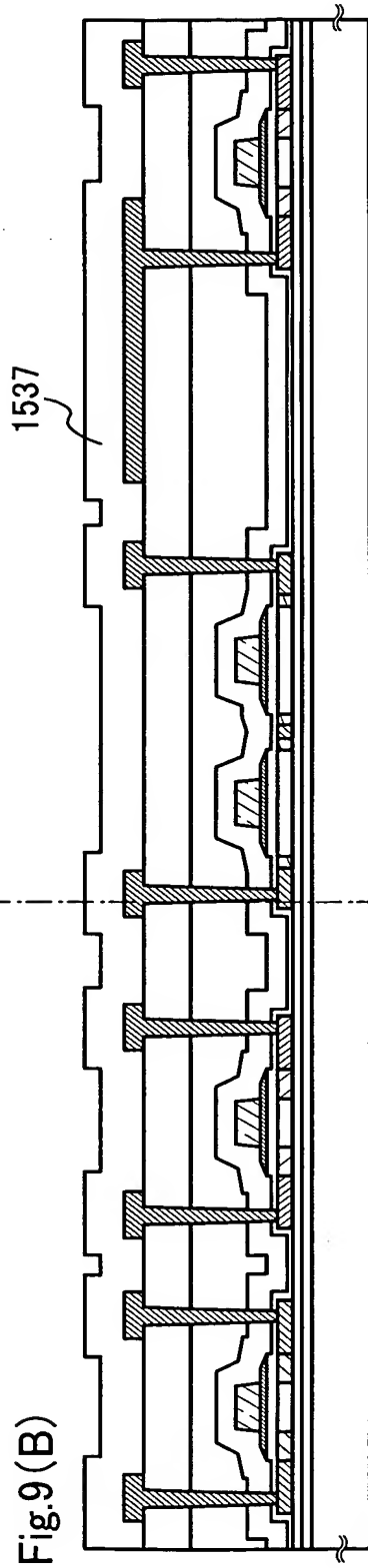
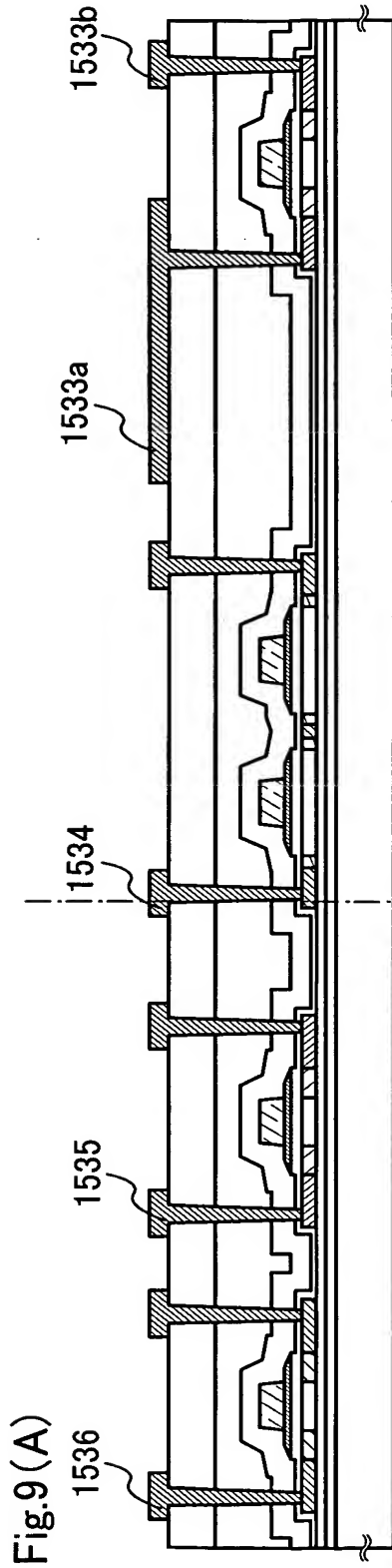


Fig.8 (C)







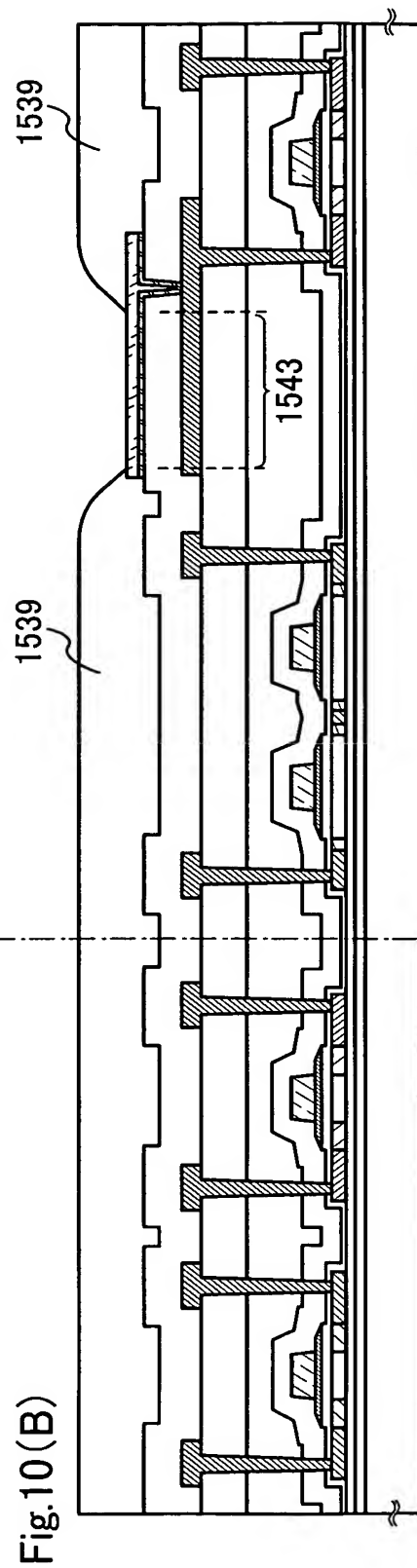
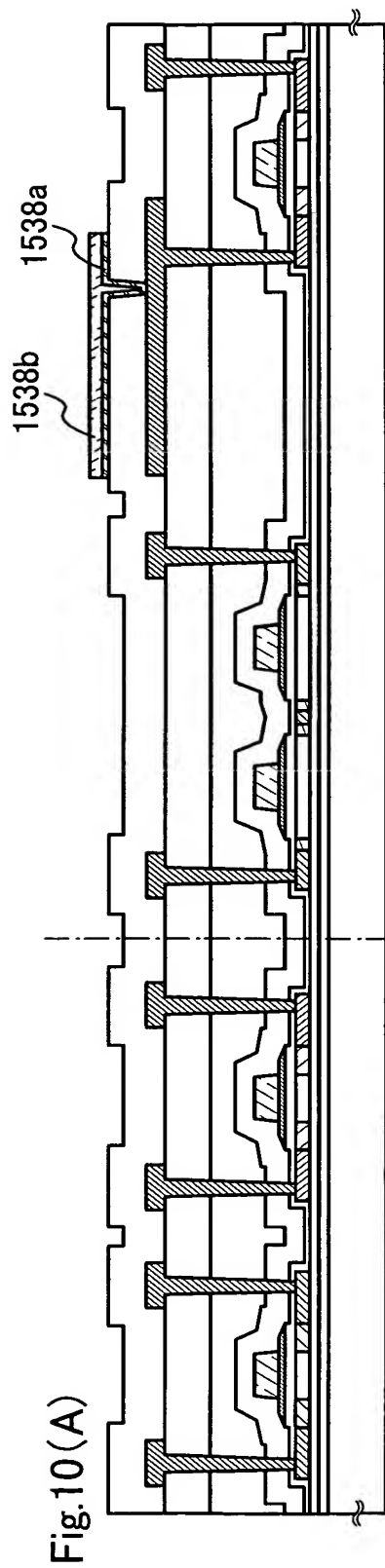
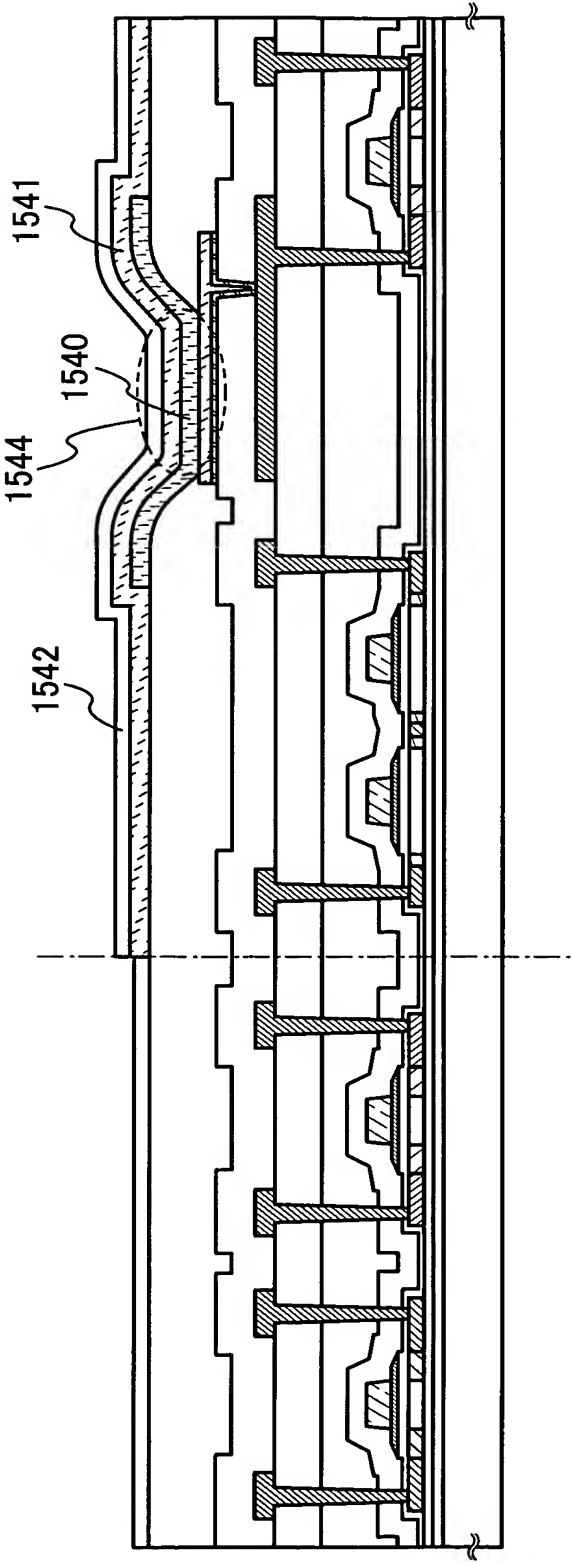
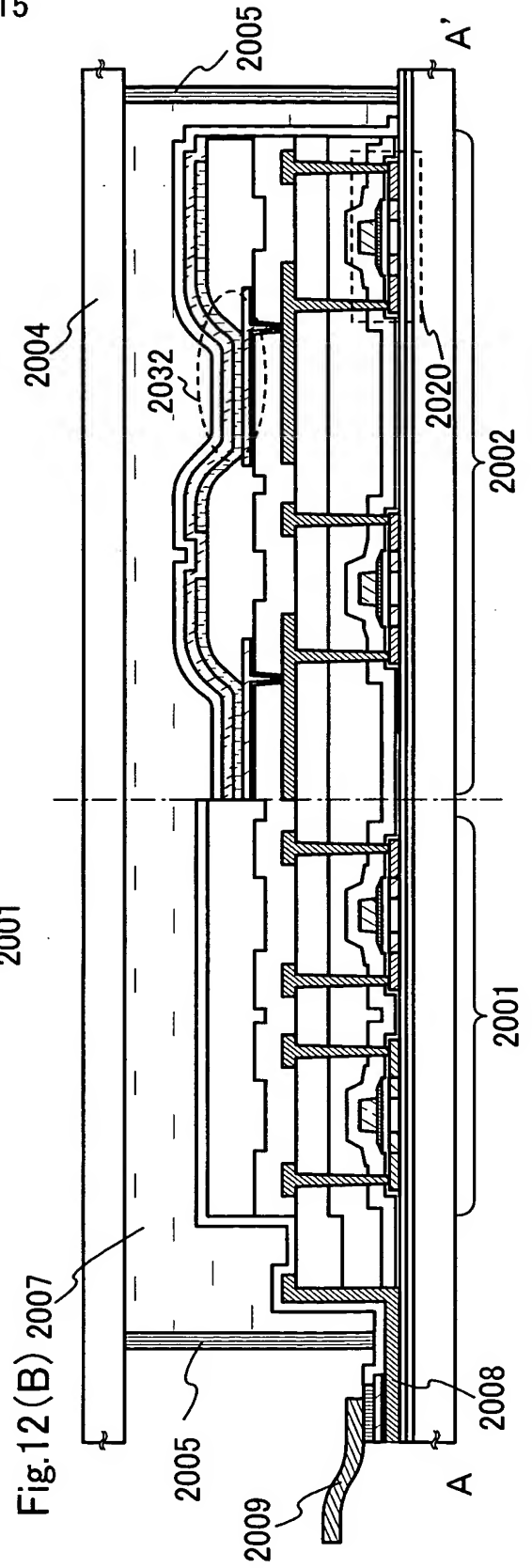
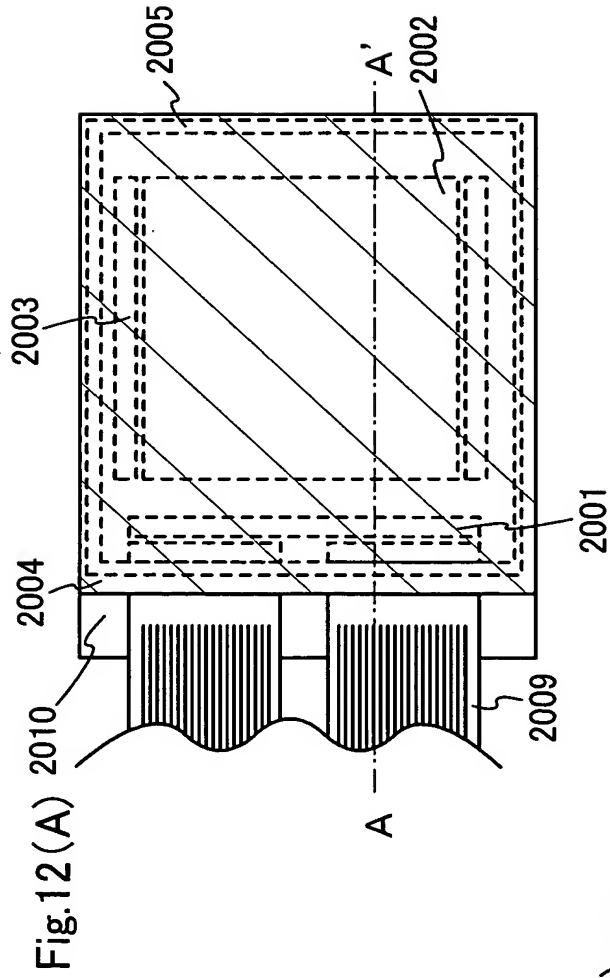


Fig.11





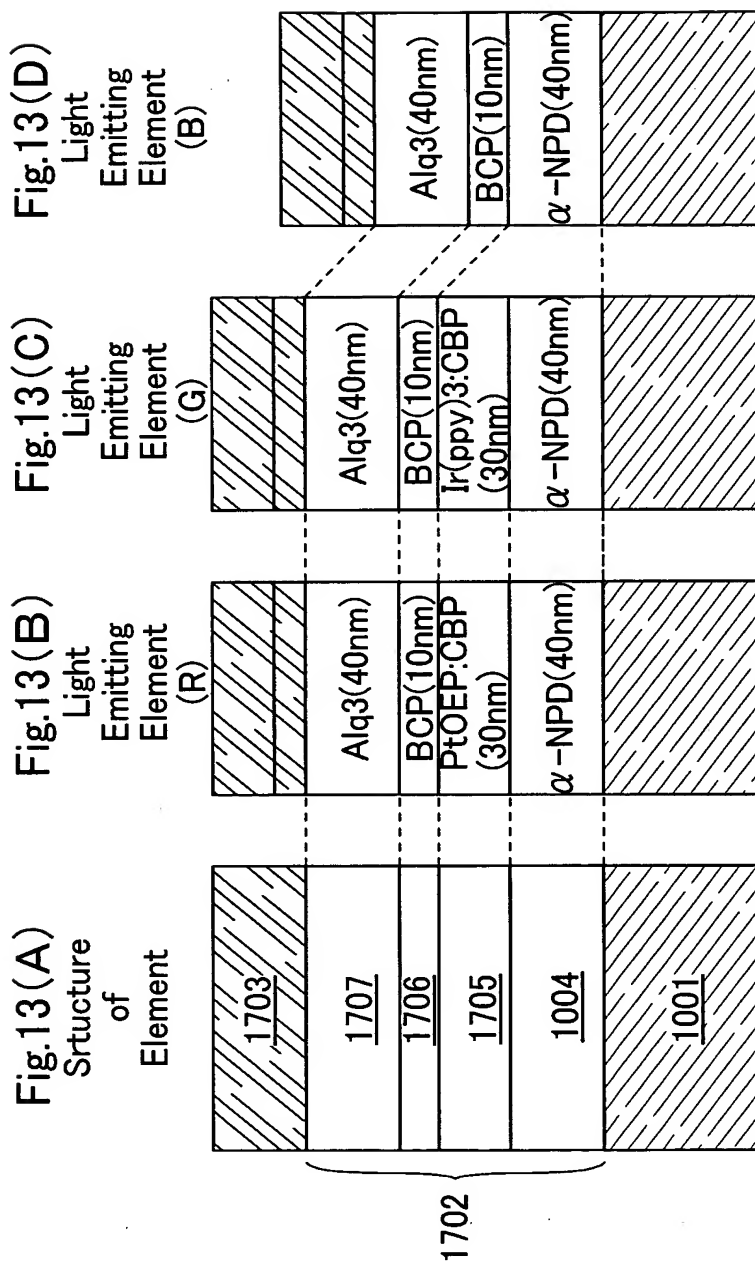


Fig.14

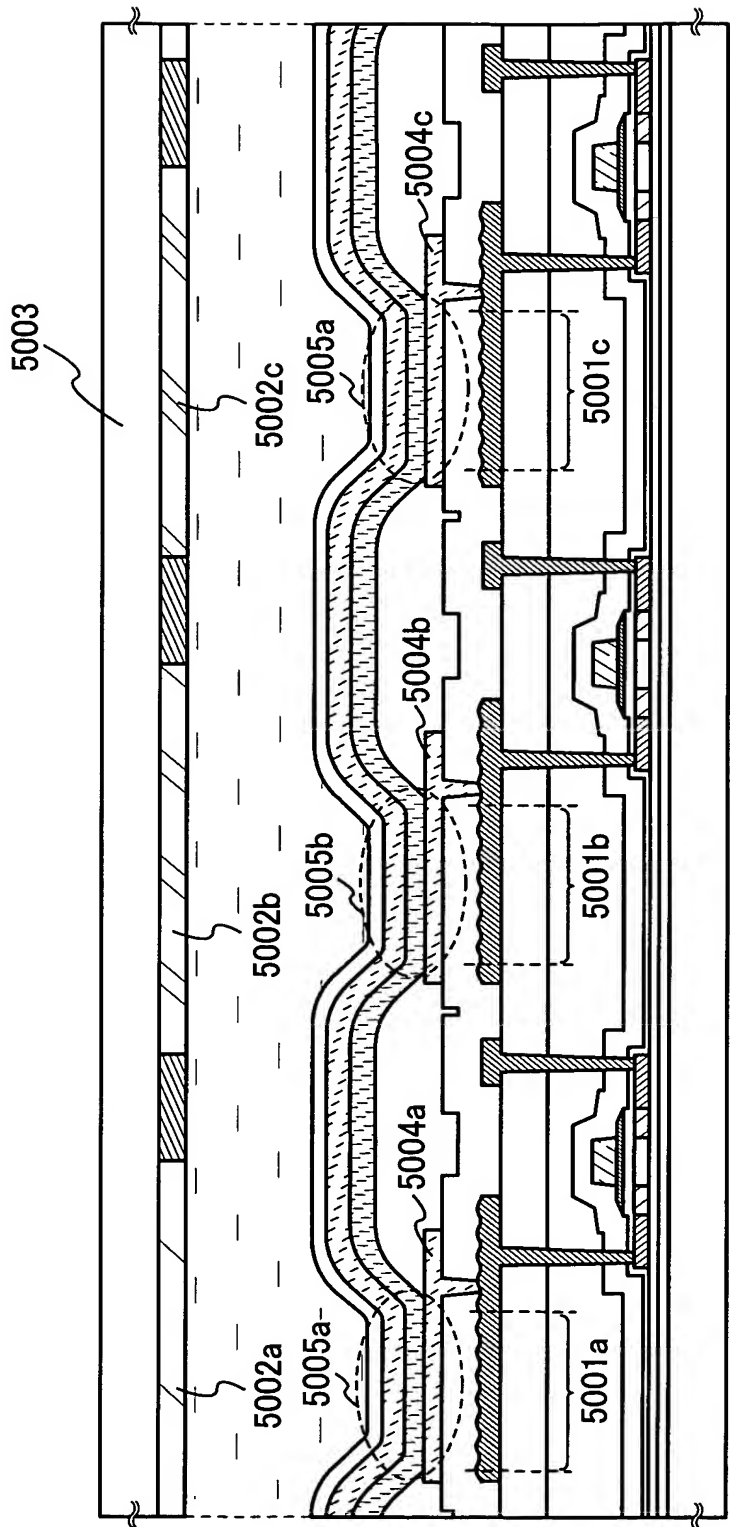


Fig.15(A)

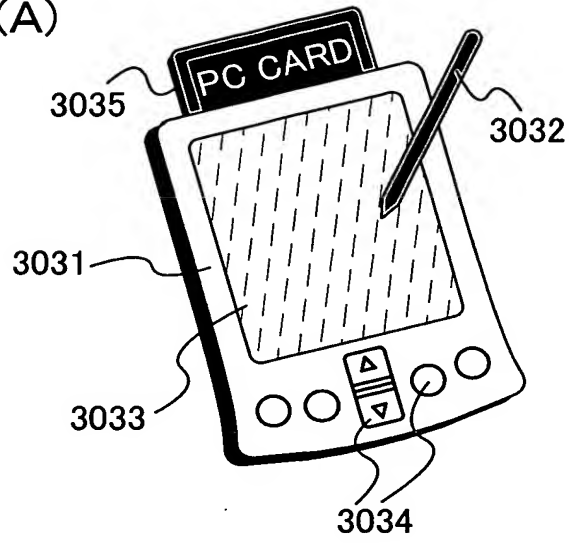


Fig.15(B)

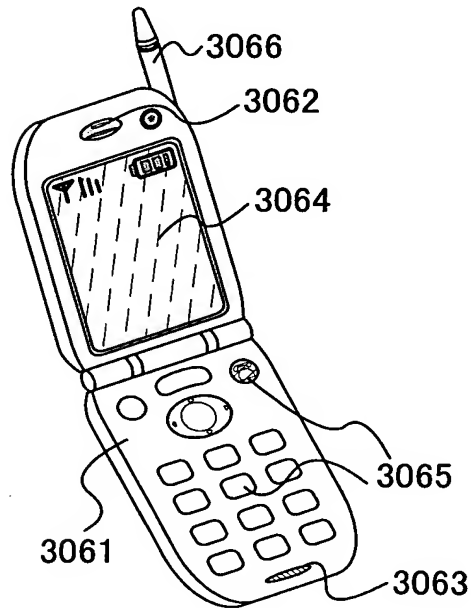


Fig.15(C)

